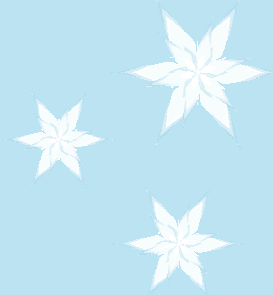




All Ohio Chapter of the
Soil & Water Conservation Society

Winter Meeting

“Can Agriculture Significantly Reduce Off-Site Movement of Soluble Nutrients?”



Monday, March 17, 2014

8:30 am to 4:40 pm

Ohio Department of Agriculture

Bromfield Auditorium

8995 E. Main St.

Reynoldsburg, Ohio

Certified Crop Advisor CEU's Approved:

Soil & Water Management: 5 hours
Nutrient Management: 1 hour

Pre-Registration

(Includes Lunch & Refreshments)

All Ohio Chapter SWCS Members
By March 7th - \$40 / After March 7th - \$50
Non-Members

By March 7th - \$50 / After March 7th - \$60
Current Student SWCS Members - \$20

Name: _____

Address: _____

Phone: _____

Make checks payable to:

All Ohio Chapter - Soil & Water
Conservation Society and mail to:
John Armentano, 3635 Dayspring Drive,
Hilliard, OH 43026

Call 614-425-7641 with any questions.

Agenda

- 8:30 am **Registration**
- 9:00 am **Welcome & Introductions** - Mark Fritz, President,
All Ohio Chapter, Soil & Water Conservation Society
- 9:05 am **Introduction and Status Update** – Kevin Elder, Chief,
ODA, Division of Livestock Environmental Permitting
- 9:20 am **Management and Treatment Options for Agricultural
Subsurface Drainage: Controlled Drainage,
BioReactors, Filters, and Near-Zero Discharge
Agricultural Systems (WRSIS)** – Dr. Larry Brown,
Professor, Department of Food, Agricultural &
Biological Engineering; The Ohio State University
- 10:15 am **Morning Break**
- 10:25 am **Livestock Manure Application Research and Future
Trends** - Glen Arnold; Nutrient Management Field
Specialist, Ohio State University Extension.
- 10:55 am **Moving to the Concept of Landscape Conservation:
Siting Conservation Practices to get the Biggest Bang
for the Buck** - Dr. Douglas R. Smith, Research Soil
Scientist, National Soil Erosion Research Laboratory,
West Lafayette, Indiana
- 11:55 am **Lunch and SWCS Annual Meeting**
- 1:10 pm **New Ohio Data on Cover Crops and Phosphorus** -
Jim Hoorman, Extension Educator,
OSU Extension, Putnam County
- 2:00 pm **Gypsum: Some Things Old and Some Things New** –
Dr. Warren Dick; Professor, Environment & Natural
Resources, Ohio Agricultural Research &
Development Center
- 2:55 pm **Afternoon Break**
- 3:05 pm **The Variables of Variable Rate Nitrogen Applications
in Corn** – Bret Margraf; Nutrient Management
Technician, Seneca Soil & Water Conservation District.
- 3:30 pm **Why do farmers choose to adopt (or not adopt)
conservation practices?** – Dr. Linda Stalker Prokopy;
Associate Professor of Natural Resources Social
Science, Department of Forestry and Natural
Resources, Purdue University
- 4:30 pm **Closing Remarks** – Clark Hutson, President Elect,
All Ohio Chapter, Soil & Water Conservation Society
- 4:40 pm **Adjourn**

Open to All Conservation and Agriculture Professionals

“Can Agriculture Significantly Reduce Off-Site Movement of Soluble Nutrients?”

Conference Theme - The emphasis of the presentations will be discussing technologies and techniques to reduce off-site movement of nutrients and the barriers to their adoption and implementation.

This conference is open to any conservation and agriculture professionals interested in reducing the off-site movement of nutrients.

Additional Information about the Presentations

Kevin Elder - Introduction and Status Update

Abstract: Kevin Elder will provide an overview of the history of the rise in soluble P over the last 10-12 years, utilizing data from Heidelberg University, and discuss the difficulties in pinpointing the causes.

Dr. Larry Brown - Management and Treatment Options for Agricultural Subsurface Drainage: Controlled Drainage, BioReactors, Filters, and Near-Zero Discharge Agricultural Systems (WRSIS)

Abstract: Research and applications of agricultural water management systems and techniques that reduce off-site water quality and quantity impacts will be discussed. Sub-topics include: water harvesting and recycling, drainage water management, agricultural constructed wetlands, sub-irrigation, crop yields, etc.

Glen Arnold - Livestock Manure Application Research and Future Trends

Abstract: Glen Arnold will present his findings from on-farm manure plot research and his thoughts on expanded use of drag hose application to corn in the coming years.

Dr. Douglas R. Smith - Moving to the Concept of Landscape Conservation: Siting Conservation Practices to get the Biggest Bang for the Buck

Abstract: Placing conservation practices in the landscape currently occurs on a voluntary basis. With calls to reduce phosphorus loading to Lake Erie by roughly 40% and nitrogen loading to the Gulf of Mexico by roughly 40%, as conservationists, we should look at new ways to optimize conservation practice placement. With ever more intensive publicly available GIS layers, including the release of LiDAR topography data, more detailed data can be used to scout the possible locations that might be ideal for conservation practice placement. Using some of these GIS data layers, a tributary to the St. Joseph River was chosen and mapped. Siting criteria for various in-field, edge-of-field and stream conservation practices were applied to the map. With a targeted 40% reduction in P loading, several maps with various combinations of conservation practices were selected and presented to farmers in the watershed. In this presentation, we will discuss the background of the project, and the siting of the various conservation practices, including; controlled drainage, grassed waterways, blind inlets, saturated tile buffers, and two-stage ditches. A brief discussion of potential incentives, barriers and limitations to adoption will also be discussed.

Jim Hoorman - New Ohio Data on Cover Crops and Phosphorus

Abstract: Recently collected Ohio soil test data using phosphorus speciation is showing that phosphorus is tied up by calcium/magnesium, iron oxides, and aluminum oxides. However, under certain environmental conditions (saturated soils, no oxygen), the iron oxide is being reduced by the soil microbes hungry for oxygen, releasing soluble reactive phosphorus. Data on various cropping systems has been collected which shows how the phosphorus is tied up. Cover crops and vegetated systems tie up the phosphorus in a stable phosphorus form that remains in the soil and change the soil conditions to increase our phosphorus use efficiency.

Dr. Warren Dick - Gypsum: Some Things Old and Some Things New

Abstract: Dr. Warren Dick will provide a brief background about gypsum and then describe some soil, water and crop interactions associated with its use as a soil amendment and how its use could be properly expanded.

Bret Margraf - The Variables of Variable Rate Nitrogen Applications in Corn

Abstract: There are many pieces to the puzzle of variable rate nitrogen management; management zones, unmanned aerial drones, crop sensors, seed population, soil type and properties, nitrogen rates, etc. How we can piece the puzzle together to increase the adoption rate of this technology?

Dr. Linda Stalker Prokopy - Why do Farmers Choose to Adopt (or Not Adopt) Conservation Practices?

Abstract: Dr. Prokopy will summarize ten years of research examining what motivates farmers to adopt conservation practices. This research explores characteristics of farmers, conservation practices, and communities/watersheds that lead to greater adoption. Implications for designing an effective outreach program will be discussed.